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EUROPEAN PATENT APPLICATION

(21) Application number: 83101186.1

(51) Int. Cl.³: G 01 F 5/00

(22) Date of filing: 08.02.83

(30) Priority: 08.02.82 JP 17511/82

(43) Date of publication of application:
07.09.83 Bulletin 83/36

(84) Designated Contracting States:
DE FR GB

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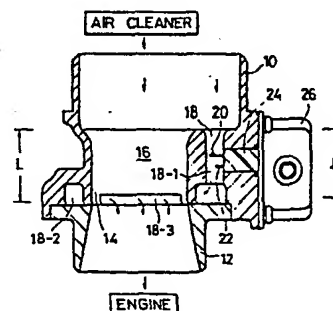
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(54) A method for measuring air flow and an air flow meter for internal-combustion engine.

(57) The air flowing in through an air cleaner is passed through a main passage and sucked into an internal-combustion engine. A part of the air flowing through the main passage (16) flows in a by-pass passage (18). An air flow sensor (20) is provided in the by-pass passage. In this case, the length (1) of the bypass passage is substantially three or more times longer than that of a part (L) of the main passage corresponding thereto. Accordingly, even when the internal-combustion engine is operated with a throttle nearly totally open and the air in the main passage is pulsated, the average flow rate in the by-pass passage increases owing to the inertial lag effect obtained by lengthening the by-pass passage, so that it is possible to prevent the output of the flow sensor from undesirably lowering.

FIG. 11



Title of the Invention

A. METHOD FOR MEASURING AIR FLOW AND AN AIR FLOW METER
FOR INTERNAL-COMBUSTION ENGINE

Background of the Invention

5 Field of the Invention:

The present invention relates to an air flow meter and a method for measuring the flow rate of intake air supplied to an internal-combustion engine of an automobile or the like.

10 Description of the Prior Art:

There are a variety of known methods for measuring the flow rate of intake air supplied to an internal-combustion engine. Among them, heat-sensitive air flow meters, such as hot-wire
15 air flow meters, are widely employed, since they are generally excellent in responsiveness and capable of measuring the mass flow rate. Such heat-sensitive air flow meters have been made well known by U.S.P. Nos. 3,747,577, 3,750,632 and
20 3,829,966. These known heat-sensitive air flow meters are arranged such that as a flow rate sensing part a platinum wire with a diameter of from 70 μ m to 100 μ m is stretched inside an intake pipe. This arrangement, however, is insecure in
25 durability and easily mechanically damaged by a

FIG. 3

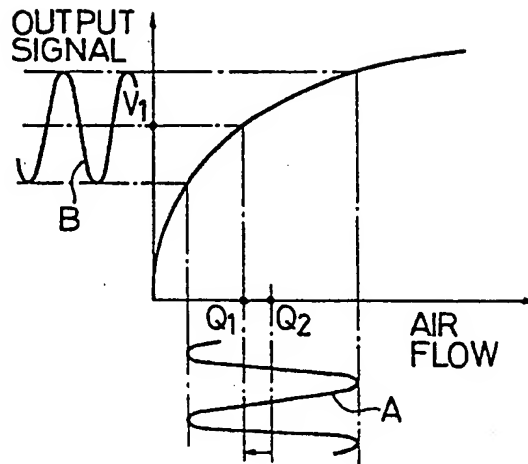


FIG. 4

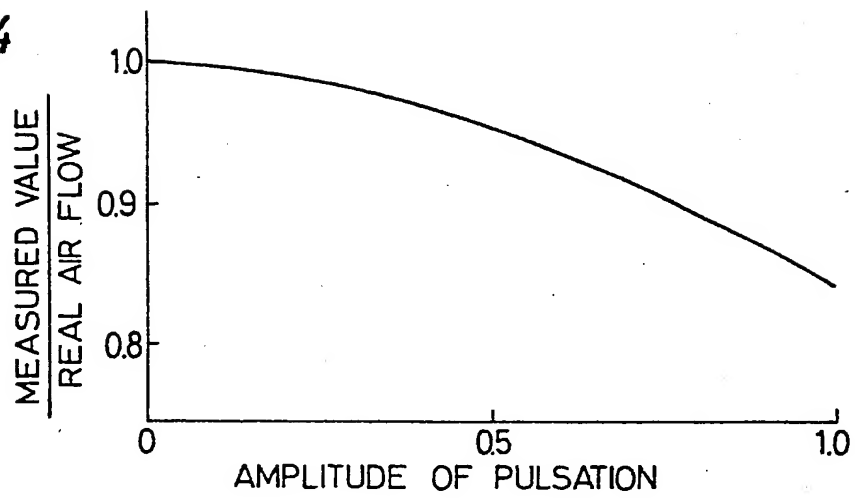


FIG. 5

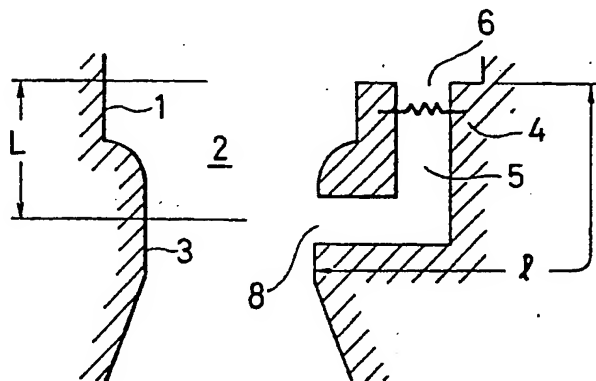


FIG. 10

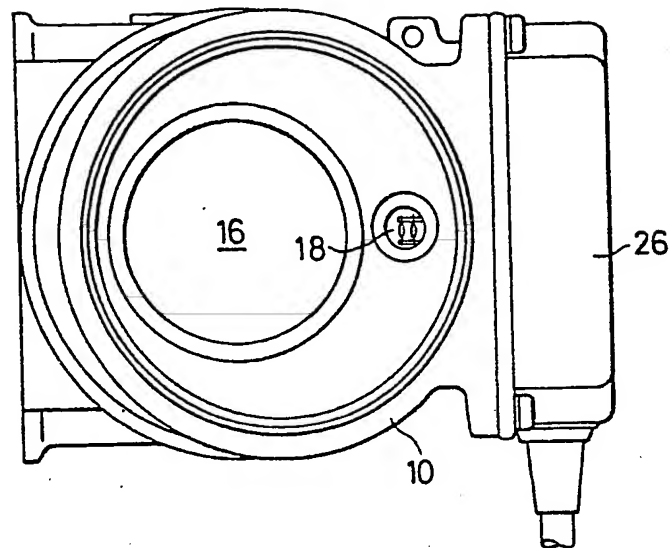


FIG. 11

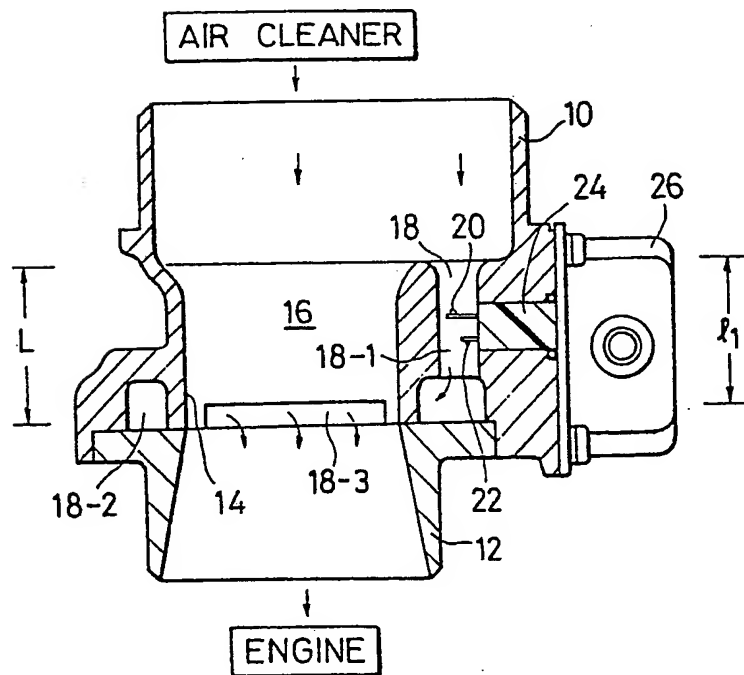


FIG. 12

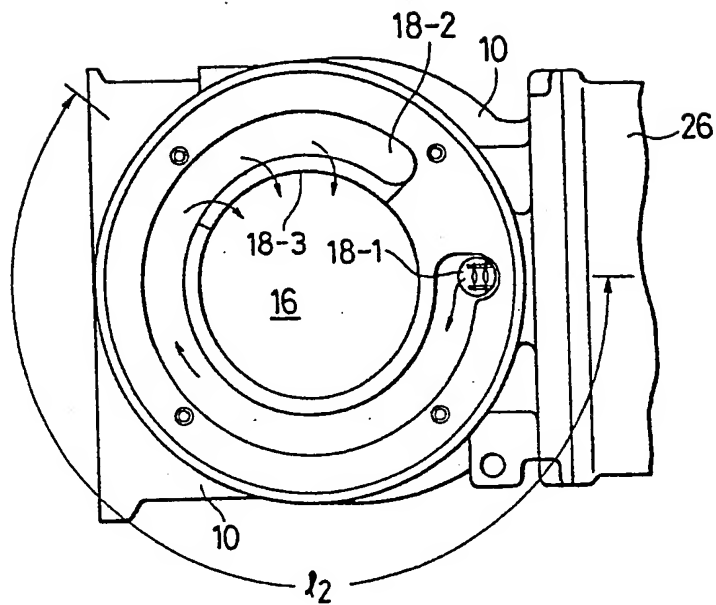


FIG. 13

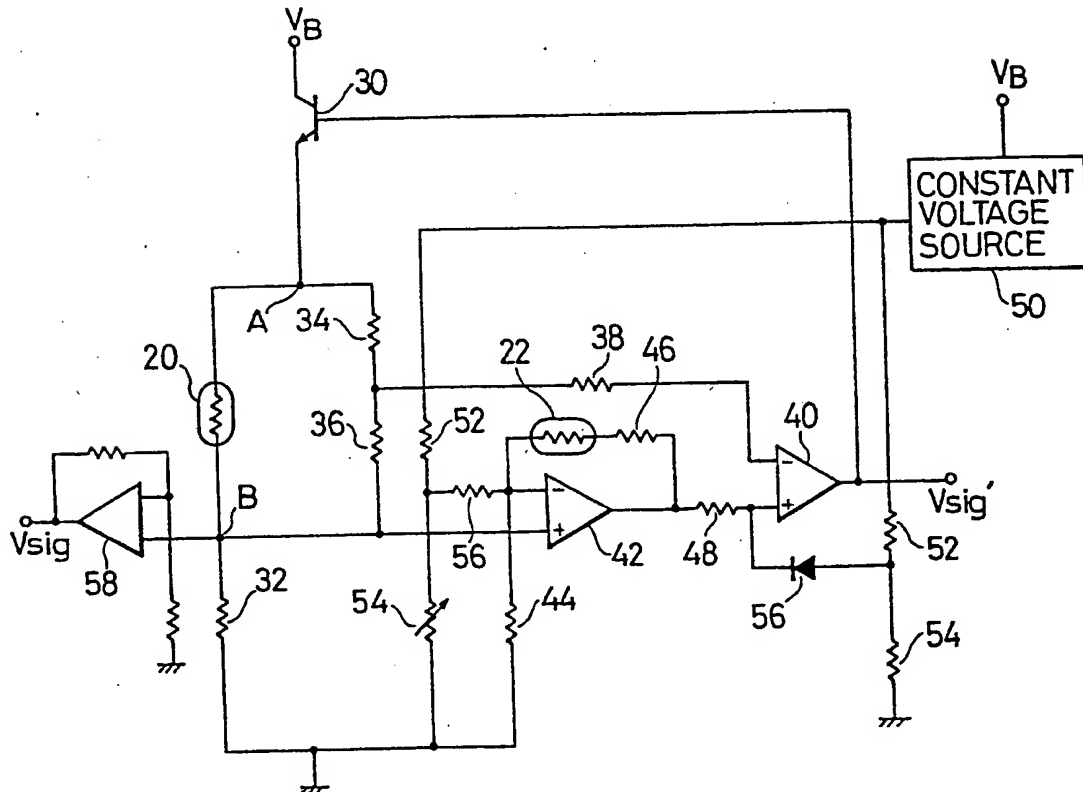


FIG. 14

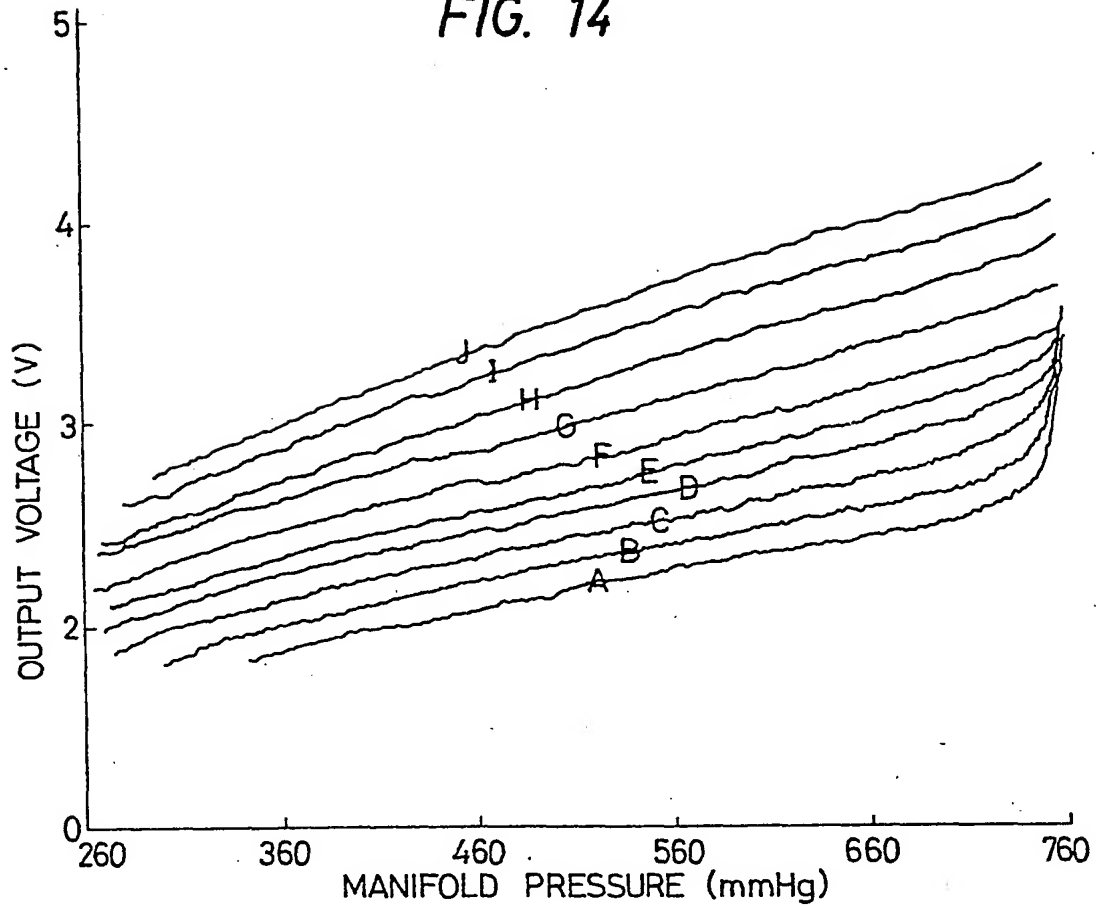


FIG. 15

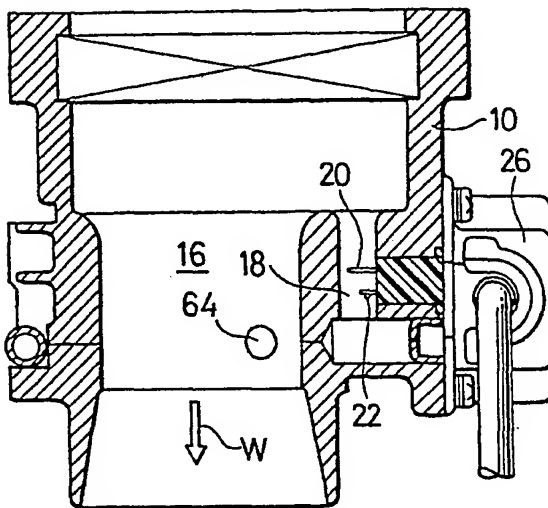


FIG. 16

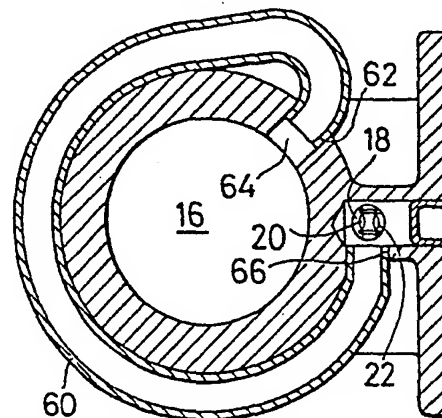


FIG. 17

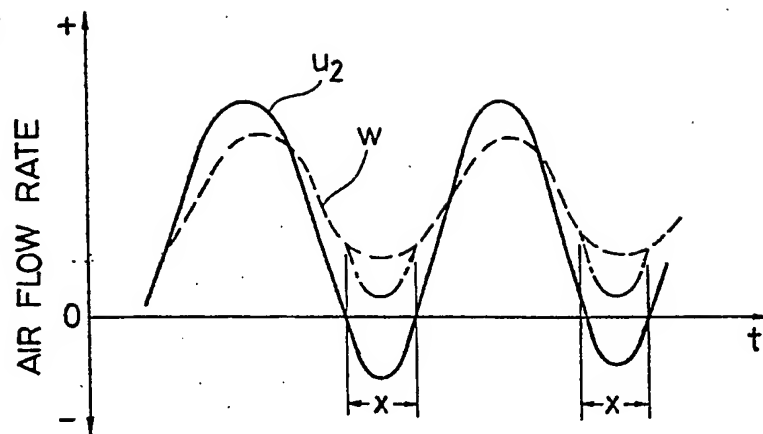


FIG. 18

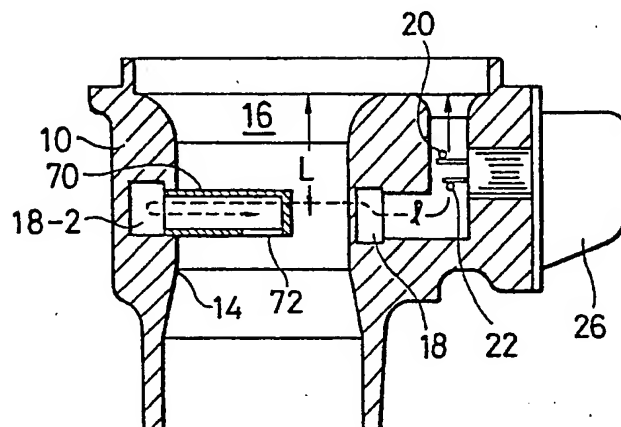


FIG. 19

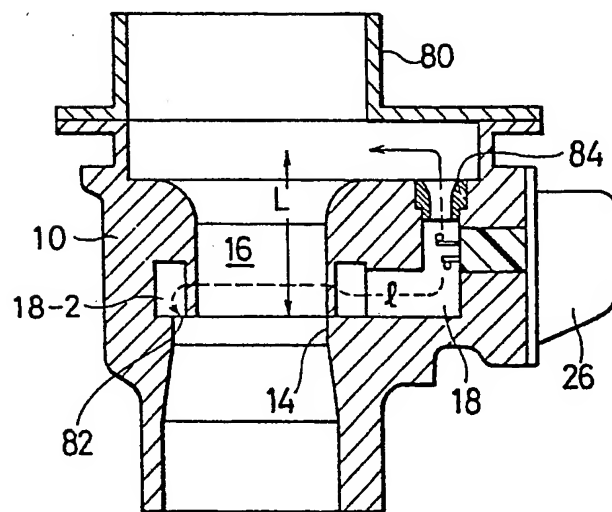


FIG. 20

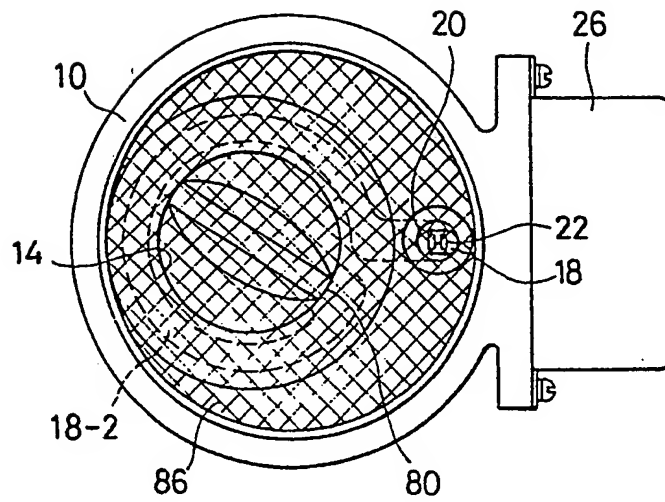


FIG. 21

